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# Nuclear Facility Licensing, Terrorist Threats, and NEPA Section 102(2)(C) Compliance

Michael DeIulis

*Boston College Law School*, [michael.deiulis@bc.edu](mailto:michael.deiulis@bc.edu)

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# NUCLEAR FACILITY LICENSING, TERRORIST THREATS, AND NEPA SECTION 102(2)(C) COMPLIANCE

MICHAEL DEIULIS\*

**Abstract:** The conflicting decisions for the Courts of Appeals for the Third and Ninth Circuits in *New Jersey Department of Environmental Protection v. Nuclear Regulatory Commission* and *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Commission*, respectively, leave it an open question outside those jurisdictions whether the Nuclear Regulatory Commission (NRC) must account for the environmental impacts of terrorism under the National Environmental Policy Act (NEPA) § 102(2)(C). Courts should follow the Ninth Circuit's approach of requiring such an analysis because the impacts of terrorism are not too far removed from the underlying agency action. Although programmatic treatment of the environmental effects of terrorism satisfies NEPA's mandate, the NRC's current approach of implicitly accounting for terrorism within its "accident" analysis is insufficient. This Note argues that the NRC should supplement its Generic Environmental Impact Statement with a section explicitly addressing the potential environmental impacts of terrorism. Accounting for a wider array of reasonably foreseeable impacts in this manner will ensure statutory compliance and promote environmental preservation.

## INTRODUCTION

In late October 2012, Hurricane Sandy pummeled the United States's East Coast and forced the emergency shutdown of three nuclear reactors.<sup>1</sup> Three more nuclear facilities took the precaution of reducing their output while the nation's oldest plant, the Oyster Creek facility in New Jersey, activated its backup cooling generators.<sup>2</sup> While the nuclear industry was busy applauding itself for averting a disaster, some observers remained somewhat skeptical about the emergency preparedness of the country's 104 nuclear reactors.<sup>3</sup> This

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<sup>1</sup> Evan Osnos, *Sandy, Fukushima, and the Nuclear Industry*, NEW YORKER (Nov. 2, 2012), <http://www.newyorker.com/online/blogs/evanosnos/2012/11/sandy-fukushima-and-the-nuclear-industry.html>, available at <http://perma.cc/U9EB-746U>.

<sup>2</sup> *Id.*

<sup>3</sup> *See id.*

sense of caution was justified given the triple meltdown that occurred just months earlier at Japan's Fukushima Daiichi nuclear power plant.<sup>4</sup> Aside from Fukushima's well-documented human health effects, massive amounts of radioactivity were released into the atmosphere, soil, and groundwater.<sup>5</sup> The consequences of a core meltdown can be catastrophic, regardless of whether precipitated by a hurricane or an earthquake and tsunami, as was the case in Japan.<sup>6</sup> Although natural disasters such as Hurricane Sandy cause many Americans to fear a domestic-Fukushima, a different kind of nuclear threat lurks in the shadows, one less-discussed but no less plausible.<sup>7</sup>

President George W. Bush revealed in his January 2002 State of the Union address that U.S. forces "found diagrams of American nuclear power plants" among al-Qaeda materials hidden in Afghani caves.<sup>8</sup> Additionally, al-Qaeda training manuals, allegedly identifying nuclear facilities as primary targets for terrorist strikes, were also recovered.<sup>9</sup> The Nuclear Regulatory Commission (NRC) consequently issued an advisory to all the facilities and warned them of the possibility of an aerial terrorist attack.<sup>10</sup> Eight state governors perceived the threat as credible enough to warrant calling in the National Guard to protect their states' nuclear plants.<sup>11</sup> Within this post-9/11 context of heightened vigilance, states, organizations, and citizens all began exerting pressure on the NRC to account for the environmental impacts of terrorism as part of its facility licensing process.<sup>12</sup> The NRC, however, has generally declined to consider such impacts unless judicially compelled to do so.<sup>13</sup>

In 2006, the U.S. Court of Appeals for the Ninth Circuit required the NRC to account for the environmental impacts of terrorism pursuant to the National Environmental Policy Act's (NEPA) Environmental Impact Statement (EIS)

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<sup>4</sup> See *id.*

<sup>5</sup> Alex Rosen, Effects of the Fukushima Nuclear Meltdowns on Environment and Health 1–9 (Mar. 9, 2012) (unpublished manuscript) (on file with University Clinic Dusseldorf, Department of General Pediatrics), available at [http://www.fukushima-disaster.de/fileadmin/user\\_upload/pdf/english/ipnnw\\_health-effects\\_fukushima.pdf](http://www.fukushima-disaster.de/fileadmin/user_upload/pdf/english/ipnnw_health-effects_fukushima.pdf) and <http://perma.cc/426B-2TBL>.

<sup>6</sup> See *id.* at 1–5.

<sup>7</sup> See *infra* note 123 and accompanying text; Osnos, *supra* note 1.

<sup>8</sup> Amanda Lopez, Note, *NEPA in the Post 9/11 World*, 37 *ECOLOGY L.Q.* 423, 424 (2010); *Targets for Terrorism: Nuclear Facilities*, COUNCIL ON FOREIGN REL. (Jan. 2006), <http://www.cfr.org/homeland-security/targets-terrorism-nuclear-facilities/p10213>, available at <http://perma.cc/M3BQ-7F2Y>.

<sup>9</sup> Lopez, *supra* note 8, at 424; *Targets for Terrorism: Nuclear Facilities*, *supra* note 8.

<sup>10</sup> *Targets for Terrorism: Nuclear Facilities*, *supra* note 8.

<sup>11</sup> See *id.*

<sup>12</sup> Alexander T. Briggs, *Managing the Line Between Nuclear Power and Nuclear Terror: Considering the Threat of Terrorism as an Environmental Impact*, 8 *SETON HALL CIRCUIT REV.* 223, 225 (2011).

<sup>13</sup> *Id.*; see *infra* notes 124, 127 and accompanying text.

provision.<sup>14</sup> Three years later, the U.S. Court of Appeals for the Third Circuit found that such impacts are too attenuated and therefore need not be accounted for.<sup>15</sup> Given the circuit split, it remains an open question outside those jurisdictions whether the NRC must account for terrorism during EIS preparation.<sup>16</sup>

Part I of this Note provides an overview of the NEPA process and its applicability to federal agencies, focusing particularly on the NRC.<sup>17</sup> Part II addresses the relevant background case law leading up to the circuit split, upon which the Ninth and Third Circuits relied in reaching their decisions.<sup>18</sup> Part III provides a detailed analysis of the decisions involved in the circuit split.<sup>19</sup> Finally, Part IV argues, in accordance with the Ninth Circuit, that the NRC should account for the environmental impacts of terrorism when licensing nuclear facilities.<sup>20</sup> This part also considers the NRC's programmatic approach to EIS preparation and notes the inadequacy of its current treatment of terrorism within the Generic Environmental Impact Statement (GEIS).<sup>21</sup>

## I. STATUTORY OVERVIEW: AN INTRODUCTION TO NEPA

President Nixon signed NEPA, commonly referred to as the Magna Carta of environmental law, into law in early 1970.<sup>22</sup> NEPA was the first and perhaps most influential of several major environmental laws enacted in response to the heightened public consciousness of environmental degradation in the 1950s and 1960s.<sup>23</sup> NEPA's drafters had a bold vision for the future of environmental law predicated on an array of fundamental values ranging from the ethical to the aesthetic.<sup>24</sup> NEPA's idealism is readily apparent in its manifesto-like purpose statement— "[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment . . . eliminate

<sup>14</sup> *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm'n*, 449 F.3d 1016, 1035 (9th Cir. 2006).

<sup>15</sup> *See N.J. Dep't of Env'tl. Prot. v. Nuclear Regulatory Comm'n*, 561 F.3d 132, 144 (3rd Cir. 2009); *infra* notes 161–162 and accompanying text.

<sup>16</sup> *See Mothers for Peace*, 449 F.3d at 1035; *New Jersey*, 561 F.3d at 144; *Pac. Gas & Elec. Co. v. San Luis Obispo Mothers For Peace*, 549 U.S. 1166 (2007) (denying certiorari).

<sup>17</sup> *See infra* notes 22–95 and accompanying text.

<sup>18</sup> *See infra* notes 96–112 and accompanying text.

<sup>19</sup> *See infra* notes 113–168 and accompanying text.

<sup>20</sup> *See infra* notes 169–265 and accompanying text.

<sup>21</sup> *See infra* notes 169–265 and accompanying text.

<sup>22</sup> LINDA LUTHER, *THE NATIONAL ENVIRONMENTAL POLICY ACT: BACKGROUND AND IMPLEMENTATION* 1–2 (2005), available at [http://www.fta.dot.gov/documents/Unit1\\_01CRSReport.pdf](http://www.fta.dot.gov/documents/Unit1_01CRSReport.pdf) and <http://perma.cc/92LZ-RCQC>.

<sup>23</sup> *Id.* at 1–3; *see* DANIEL R. MANDELKER, *NEPA LAW AND LITIGATION* § 1:1 (2d ed. 2012).

<sup>24</sup> *See* ENVTL. L. INST., *LAW OF ENVIRONMENTAL PROTECTION* § 10:53 (2012); *Introduction*, NAT'L ENVTL. POL'Y ACT, [http://nepanet.wix.com/nepa\\_splash#!\\_page-2](http://nepanet.wix.com/nepa_splash#!_page-2) (last visited Feb. 2, 2014).

damage to the environment and biosphere and stimulate the health and welfare of man.”<sup>25</sup>

NEPA aspires to rectify the inherent tension of an ever-evolving world, constrained by a finite supply of natural resources.<sup>26</sup> The Act’s uniqueness lies within the purely procedural mechanisms for achieving its substantive goals.<sup>27</sup> Despite this procedural reliance, NEPA imposes few affirmative mandates.<sup>28</sup> In its most simplistic sense, the Act is an environmental full disclosure directive.<sup>29</sup> NEPA compels the government to exercise forethought by accounting for the potential environmental impacts of proposed federal actions.<sup>30</sup> The Act’s singular operational mandate thus calls for the formal preparation of a detailed EIS.<sup>31</sup>

### A. NEPA’s Core: The EIS

All federal agencies are subject to NEPA’s environmental decision-making obligations.<sup>32</sup> Consequently, whenever a federal agency seeks to undertake a major action that has a potential to “significantly affect the quality of the human environment,” it must first prepare an EIS.<sup>33</sup> The EIS must include, inter alia, both a detailed description of the environmental consequences of the proposed action and a discussion of possible alternatives.<sup>34</sup> In analyzing the EIS’s role within the broader context of the NEPA process as a whole, it is important to bear in mind that “the EIS is not an end in itself, but rather a tool to promote environmentally sensitive decisionmaking . . . [a]bove all, the EIS

<sup>25</sup> 42 U.S.C. § 4321 (2006).

<sup>26</sup> *Introduction*, *supra* note 24. “Beneath the lofty rhetoric . . . it sought to balance environmental concerns with the social, economic and other requirements of present and future generations of Americans.” *Id.*

<sup>27</sup> ENVTL. L. INST., *supra* note 24, § 10:53. According to Sen. Henry Jackson, the Act’s primary drafter, its principal importance derives from the fact that it “establishes new decision making procedures for all agencies of the federal government.” *Id.* (quoting Henry M. Jackson, *Environmental Quality, the Courts, and Congress*, 68 MICH. L. REV. 1073, 1079 (1970)).

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* § 10:53 n.2 (citing *Env’tl. Def. Fund, Inc. v. Corps of Eng’rs*, 470 F.2d 289, 297 (8th Cir. 1972)).

<sup>30</sup> *See id.*

<sup>31</sup> *See* 42 U.S.C. § 4332(2)(C) (2006); *see* ENVTL. L. INST., *supra* note 24, § 10:53.

<sup>32</sup> MANDELKER, *supra* note 23, § 1:3 (referencing Calvert Cliffs’ Coordinating Comm., Inc. v. Atomic Energy Comm’n, 449 F.2d 1109 (D.C. Cir. 1971)).

<sup>33</sup> 42 U.S.C. § 4332(2)(C). Courts have demonstrated a proclivity for interpreting the term “federal action” broadly. MANDELKER, *supra* note 23, § 1:1. NEPA never actually uses the phrase “environmental impact statement” but rather refers to a “detailed statement” discussing environmental impacts. ENVTL. L. INST., *supra* note 24, § 10:13.

<sup>34</sup> 42 U.S.C. § 4332(2)(C).

should be used to assess environmental impacts, not to justify decisions already made.”<sup>35</sup>

The process leading up to EIS preparation begins with the formal publication of a Notice of Intent (NOI) in the Federal Register, which serves to inform the public of the agency’s intended action.<sup>36</sup> The NOI also triggers the scoping process—a period of collaboration between the agency and public to define the relevant array of issues to be addressed in the EIS.<sup>37</sup> The preparation process produces both an initial draft and a final EIS.<sup>38</sup> The draft EIS must include a “Purpose and Need” statement that explains the rationale behind the proposed action.<sup>39</sup> The draft is then subject to a forty-five day period of public review and comment.<sup>40</sup> Following approval of the final EIS, the process culminates with the implementing agency’s publication of a “Record of Decision” that explains the final result, alternatives considered, and plans for mitigation of environmental damage.<sup>41</sup>

While the EIS is NEPA’s defining feature and provides its primary source of efficacy, alternative means of assessment are available that have the capability to obviate the need for an EIS.<sup>42</sup> In fact, only a small minority of agency actions require EIS preparation.<sup>43</sup>

## 1. Alternatives to EIS Preparation

Before a federal agency adopts a course of action, it must first determine whether the action warrants EIS preparation.<sup>44</sup> An agency prepares an environmental assessment (EA) when the proposed action’s environmental impacts are uncertain.<sup>45</sup> The EA is therefore a preliminary document—an abridged

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<sup>35</sup> ENVTL. L. INST., *supra* note 24, § 10:20 (quoting 40 C.F.R. § 1502.02(g) (2012)).

<sup>36</sup> LUTHER, *supra* note 22, at 18.

<sup>37</sup> *Introduction*, *supra* note 24.

<sup>38</sup> LUTHER, *supra* note 22, at 18.

<sup>39</sup> *Introduction*, *supra* note 24.

<sup>40</sup> *Id.*

<sup>41</sup> LUTHER, *supra* note 22, at 20; *Introduction*, *supra* note 24.

<sup>42</sup> See ENVTL. L. INST., *supra* note 24, § 10:9; LUTHER, *supra* note 22, at 17.

<sup>43</sup> LUTHER, *supra* note 22, at 17–18. For example, the Department of Transportation’s Federal Highway Administration reported that only about three percent of all highway projects in 2001 required preparation of an EIS. *Id.*

<sup>44</sup> ENVTL. L. INST., *supra* note 24, § 10:10. NEPA provides “categorical exclusions” for certain classifications of agency actions that, individually or cumulatively, do not significantly impact the quality of the human environment. *Introduction*, *supra* note 24. The decision to opt for a categorical exclusion is typically based on an agency’s prior experience with that type of action, which has previously been determined to have only minor effects. *Id.* Such categories of actions obviate the need to prepare an EIS and permit the agency to proceed with the proposed action. ENVTL. L. INST., *supra* note 24, § 10:10.

<sup>45</sup> LUTHER, *supra* note 22, at 17.

EIS—that explores and clarifies uncertainties surrounding the proposed action to determine the necessity of EIS preparation.<sup>46</sup> If at any time during EA preparation or analysis, the agency determines the proposed action’s environmental impacts to be significant, EIS preparation should commence.<sup>47</sup> Conversely, a determination of insignificant or nonexistent impacts triggers a finding of no significant impact (FONSI), which enables the action to proceed unimpeded.<sup>48</sup> Completion of an EA is not a prerequisite for EIS preparation.<sup>49</sup> Agencies are permitted to, and often should, jump right to EIS preparation if prior experience and common sense dictate that the proposed action will have a significant environmental impact.<sup>50</sup>

## 2. The Programmatic Environmental Impact Statement

There are inherent difficulties in examining the cumulative effects of related agency actions on an individual basis.<sup>51</sup> The Programmatic Environmental Impact Statement (PEIS) was specifically developed to overcome this problem.<sup>52</sup> The programmatic approach considers groups of related actions together, or comprehensively reviews the impacts of an agency-wide program before it produces actions that will necessitate individual examination.<sup>53</sup>

The Council on Environmental Quality’s (CEQ)<sup>54</sup> regulations expressly encourage agencies to “tier” their EISs.<sup>55</sup> Tiering involves separating general issues, broad in scope and applicability, from issues unique to a certain site, location, or action.<sup>56</sup> The former are addressed in a broad, programmatic statement that is generic in nature, while the latter are reserved for a narrow, often site-specific, analysis.<sup>57</sup> This approach eliminates repetitive discussion of issues and enables the agency to focus its analysis on site-specific issues that

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<sup>46</sup> See *id.* at 20. The three primary functions served by the EA are (1) providing evidence and analysis for determining the necessity of an EIS, (2) aiding agency compliance with NEPA in the absence of an EIS, and (3) facilitating preparation of an EIS under applicable circumstances. *Id.*

<sup>47</sup> *Id.* at 21.

<sup>48</sup> See *id.*

<sup>49</sup> ENVTL. L. INST., *supra* note 24, § 10:10.

<sup>50</sup> *Id.*

<sup>51</sup> MANDELKER, *supra* note 23, § 9:2.

<sup>52</sup> See *id.*

<sup>53</sup> *Id.* An example of such interrelated actions might be the proposed construction of a group of individual highways that make up a regional highway network. *Id.*

<sup>54</sup> The CEQ is a NEPA-created federal agency that is principally responsible for administering the Act through the adoption of interpretive regulations. *Id.* § 2:8.

<sup>55</sup> 40 C.F.R. § 1502.20 (2012).

<sup>56</sup> *Id.* § 1508.28.

<sup>57</sup> *Id.*

warrant a heightened degree of attention.<sup>58</sup> The regulations state that the site-specific EIS need only summarize those elements already addressed in a broad PEIS and should concentrate on issues unique to the site-specific action.<sup>59</sup> Consequently, many federal agencies—with varying degrees of success—have begun to adopt PEISs to increase administrative efficiency, facilitate agency planning, and provide analytical foundations for subsequent project-specific actions.<sup>60</sup>

Determining whether a PEIS is appropriate for a certain type of agency action requires an evaluation of the project's nature and its nexus to potential environmental impacts.<sup>61</sup> Use of a PEIS is typically appropriate when proposed actions are linked geographically or generically—by timing, environmental impacts, alternatives, implementation methods, or subject matter.<sup>62</sup> The application of a PEIS is therefore not restricted solely to those actions derived from formally recognized agency policies.<sup>63</sup>

Since PEISs are essentially a subspecies of the EIS, the preparation process is largely the same.<sup>64</sup> NEPA's vague treatment of the PEIS has caused various agencies to develop their own unique approaches to programmatic analysis.<sup>65</sup> Although programmatic NEPA analyses have been declared “valuable decisionmaking tools,” the judiciary has nevertheless been hesitant to embrace them willingly.<sup>66</sup>

### B. Application to Federal Agencies: The NRC

Although the CEQ administers NEPA, the actual power conferred to that agency is merely advisory.<sup>67</sup> The CEQ's confinement to an advisory role high-

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<sup>58</sup> *Id.* §§ 1508.28, 1502.20.

<sup>59</sup> *Id.* § 1502.20.

<sup>60</sup> See Beth C. Bryant, *NEPA Compliance in Fisheries Management: The Programmatic Supplemental Environmental Impact Statement on Alaskan Groundfish Fisheries and Implications for NEPA Reform*, 30 HARV. ENVTL. L. REV. 441, 441–42 (2006).

<sup>61</sup> *Id.* at 446.

<sup>62</sup> 40 C.F.R. § 1502.4(c) (2012).

<sup>63</sup> See *id.*

<sup>64</sup> Bryant, *supra* note 60, at 445.

<sup>65</sup> *Id.*

<sup>66</sup> *Id.* at 441; GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, PUBLIC NATURAL RESOURCES LAW § 17:31 (2d ed. 2013); NEPA TASK FORCE, THE NEPA TASK FORCE REPORT TO THE COUNCIL ON ENVIRONMENTAL QUALITY: MODERNIZING NEPA IMPLEMENTATION 35 (2003), available at [http://cdn.ca9.uscourts.gov/datastore/library/2013/02/26/Pacific\\_NEPA%20final.pdf](http://cdn.ca9.uscourts.gov/datastore/library/2013/02/26/Pacific_NEPA%20final.pdf) and <http://perma.cc/QFR4-RZYS>.

<sup>67</sup> MANDELKER, *supra* note 23, § 2:8. The CEQ's responsibilities include environmental review, research, reporting, evaluation of federal activities for NEPA compliance, and preparation of annual environmental quality reports. *Id.*



lights the considerable discretion afforded to federal agencies in their efforts to apply and interpret NEPA.<sup>68</sup> In fact, individual federal agencies have nearly unmitigated authority to decide how best to apply the CEQ's regulations.<sup>69</sup>

One such agency, the NRC, formerly the Atomic Energy Commission, is the primary federal agency responsible for regulating radioactive materials under the Atomic Energy Act.<sup>70</sup> More specifically, the NRC controls the nation's use of byproduct, source, and special nuclear material by means of a five-part regulatory process involving guidance, licensing, oversight, operational experience, and decisional support.<sup>71</sup> One of the NRC's primary responsibilities is the licensing of commercial nuclear power plants.<sup>72</sup> Both the issuance of new licenses and the relicensing of existing facilities qualify under NEPA as major federal actions "significantly affecting the quality of the human environment."<sup>73</sup> The NRC must therefore consider the potential environmental impacts of such actions as part of its decision-making process.<sup>74</sup>

### 1. The NRC's Programmatic Approach to NEPA Compliance: The GEIS and SEIS

The NRC's approach to EIS preparation depends on the nature and scope of the proposed action.<sup>75</sup> NRC regulations provide that licenses issued to newly constructed facilities must be accompanied by site-specific EISs.<sup>76</sup> On the other hand, the NRC takes a programmatic approach to analyzing the potential environmental impacts associated with the relicensing of existing facilities.<sup>77</sup> The agency further divides and categorizes the environmental impacts of license renewal into generic and site-specific issues.<sup>78</sup> All issues that are general

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<sup>68</sup> *See id.*

<sup>69</sup> *Id.* This authority is subject to judicial review only in the event that an agency's particular method of implementation is challenged, despite the fact that NEPA lacks a provision explicitly providing for judicial review. *Id.* § 1:1.

<sup>70</sup> ALI ABAZARI & JACOB ARECHIGA, TEXAS PRACTICE SERIES: ENVIRONMENTAL LAW § 18:2 (2d ed. 2012).

<sup>71</sup> *How We Regulate*, NUCLEAR REG. COMM'N, <http://www.nrc.gov/about-nrc/regulatory.html> (last updated Dec. 19, 2013), available at <http://perma.cc/VV5V-TSE8>.

<sup>72</sup> *Id.* The NRC's licensing activities involve the issuance of new licenses, renewals, amendments, and transfers. *Id.*

<sup>73</sup> 10 C.F.R. § 51.20 (2012).

<sup>74</sup> *See* 42 U.S.C. § 4332(2)(C) (2006).

<sup>75</sup> *See* Office of Nuclear Regulatory Research, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Main Report*, NUCLEAR REG. COMM'N (May 1996), <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/v1/>, available at <http://perma.cc/T2F5-JSTF>.

<sup>76</sup> *See* 10 C.F.R. § 51.75(a).

<sup>77</sup> *Id.* § 51.95(c).

<sup>78</sup> *New Jersey*, 561 F.3d at 134; 68 Fed. Reg. 33,209, 33,209–10 (June 3, 2003).

in nature and likely to be common to multiple facilities are addressed in a GEIS.<sup>79</sup> This approach enables the NRC to perform a systematic inquiry that avoids repetitive discussion and analysis of common impacts that are already well-documented facility-wide.<sup>80</sup>

To create its GEIS, the NRC analyzed the significant environmental impacts of ninety-two different issues.<sup>81</sup> The agency determined that sixty-nine were applicable to all plants and thus amenable to generic treatment.<sup>82</sup> The remaining issues require site-specific analysis in a Supplemental Environmental Impact Statement (SEIS) for each individual facility.<sup>83</sup>

The NRC has classified the generic issues common to all nuclear plants as “Category 1” issues and those necessitating site-specific SEIS evaluation as “Category 2” issues.<sup>84</sup> Broadly classified Category 1 issues include the impacts of refurbishment, operation, uranium fuel cycle, management of waste, decommissioning, and most notably for purposes of this Note, accidents.<sup>85</sup> The NRC uses the term “accident” to account for “any unintentional event outside the normal plant operational envelope that results in a release or the potential for release of radioactive materials into the environment.”<sup>86</sup> Two basic kinds of accidents are accounted for: design-based accidents and severe accidents.<sup>87</sup>

Design-based accidents are those that pertain to the design and performance standards of a given facility.<sup>88</sup> Before being issued a license, all plants must demonstrate an ability to accommodate and safeguard against design-based accidents.<sup>89</sup> Severe accidents are described as those involving multiple failures of equipment or function.<sup>90</sup> This category of accident has a lower probability of occurrence than design-based accidents, but higher potential consequences.<sup>91</sup> The NRC’s relicensing GEIS states that externally initiated severe accidents from causes such as “tornadoes, floods, earthquakes, fires, and sabotage have not traditionally been discussed in quantitative terms.”<sup>92</sup> The NRC has occasionally performed detailed probabilistic analyses of exter-

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<sup>79</sup> Office of Nuclear Regulatory Research, *supra* note 75 (abstract).

<sup>80</sup> *Id.* § 1.1.

<sup>81</sup> 68 Fed. Reg. at 33209–10.

<sup>82</sup> *Id.*

<sup>83</sup> *Id.*

<sup>84</sup> Office of Nuclear Regulatory Research, *supra* note 75 (executive summary).

<sup>85</sup> *Id.*

<sup>86</sup> *Id.* § 5.2.

<sup>87</sup> *Id.*

<sup>88</sup> *See id.*

<sup>89</sup> *Id.* § 5.3.2.

<sup>90</sup> *Id.* § 5.2.

<sup>91</sup> *Id.*

<sup>92</sup> *Id.* § 5.3.3.1.

nal events or phenomenon, but these evaluations notably excluded sabotage from consideration.<sup>93</sup> The GEIS explains that the risks from sabotage are not accounted for because they are so nebulous as to escape quantifiable assessment.<sup>94</sup> Despite an inability to calculate the threat of sabotage accurately, the NRC opines that the risk is small and sufficiently addressed by generic consideration of internally initiated accidents.<sup>95</sup>

## II. BACKGROUND TO THE CIRCUIT SPLIT

Litigation related to the National Environmental Policy Act often requires determining whether § 102(2)(C) of the Act compels consideration of a given environmental impact.<sup>96</sup> As is often the case with statutory interpretation, this exercise is not always cut and dry.<sup>97</sup> Courts have advanced several different tests or analytical frameworks for delineating between those environmental effects that necessitate consideration and those that do not.<sup>98</sup> Council on Environmental Quality regulations meanwhile expressly require consideration of “reasonably foreseeable” impacts.<sup>99</sup>

In *Metropolitan Edison Co. v. People Against Nuclear Energy*,<sup>100</sup> the Supreme Court effectively limited the scope of NEPA-mandated analysis by exempting psychological effects from obligatory NEPA § 102(2)(C) consideration.<sup>101</sup> The Court found that “NEPA does not require [an] agency to assess every impact or effect of its proposed action, but only the impact or effect on the environment.”<sup>102</sup> The Court instructed that determining whether a particular effect warrants consideration requires an inquiry into its relationship with the

<sup>93</sup> *Id.*

<sup>94</sup> *See id.*

<sup>95</sup> *Id.*

<sup>96</sup> *See Metro. Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 766–67 (1983).

<sup>97</sup> *See* Ellen P. April, *Theories of Statutory Interpretation and (Their Limits)*, 38 LOY. L.A. L. REV. 1899, 1899–900 (2005).

<sup>98</sup> *See infra* notes 108, 119 and accompanying text.

<sup>99</sup> *See* 40 C.F.R. § 1502.22 (2012). Reasonable foreseeability “includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.” *Id.* § 1502.22(b)(4).

<sup>100</sup> 460 U.S. at 766.

<sup>101</sup> *Id.* at 779. Metropolitan Edison (“Metropolitan”) was the owner of two nuclear power plants, TMI-1 and TMI-2, located at Three Mile Island, near Harrisburg, Pennsylvania. *Id.* at 768. After a serious accident that damaged TMI-2’s reactor, the NRC ordered Metropolitan to keep TMI-1 inoperative pending a determination that it could be operated safely. *Id.* at 768–69. People Against Nuclear Energy, an association of concerned residents, contended that resuming operation of TMI-1 would be psychologically damaging to residents in the plant’s vicinity. *Id.* at 769. The Supreme Court granted certiorari to review whether NEPA requires examination of such effects. *Id.* at 771.

<sup>102</sup> *Id.* at 772 (emphasis added).

change in the physical environment.<sup>103</sup> The requisite relationship identified by the Court was that of a “reasonably close causal relationship.”<sup>104</sup>

With respect to the facility at issue, the Court ultimately found that the risk of another accident does not constitute an effect on the physical environment.<sup>105</sup> The Court, therefore, found no reasonably close causal relationship and held that the NRC need not evaluate the physiological effects of risk attendant to the facility’s resumed operation.<sup>106</sup>

In *No GWEN Alliance of Lane County, Inc. v. Aldridge*,<sup>107</sup> the U.S. Court of Appeals for the Ninth Circuit assessed the adequacy of the Air Force’s Environmental Assessment (EA) for the installation of numerous radio towers that were to become part of the Ground Wave Emergency Network (“GWEN”)—a radio communication system resistant to the effects of nuclear war.<sup>108</sup>

The Ninth Circuit rejected the district court’s application of *Metropolitan Edison* because that case dealt with a different kind of causation.<sup>109</sup> Instead, the court articulated a different standard whereby “an impact statement need not discuss remote and highly speculative consequences.”<sup>110</sup> The Ninth Circuit went on to find the casual connection between GWEN’s construction and the advent of nuclear war to be too attenuated to require discussion in an EIS.<sup>111</sup> In doing so, the court found the Alliance’s contention that GWEN would increase the likelihood of nuclear war to be merely speculative.<sup>112</sup>

### III. THE CIRCUIT SPLIT

In the atmosphere of heightened alarm and vigilance that followed the September 11th attacks, many government officials feared that similar attacks

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<sup>103</sup> *Id.* at 773.

<sup>104</sup> *Id.* at 774. The Court explicated that this relationship approximates the tort concept of proximate causation and noted that some changes in the physical environment are merely “but for” causes that may not require consideration under NEPA § 102(2)(C) because the “causal chain is too attenuated.” *Id.*

<sup>105</sup> *Id.* at 775. The Court reasoned that the fear experienced by local residents lengthens the causal chain—beginning with renewed operation of TMI-1 and ending with psychological health damage—beyond NEPA’s scope. *Id.*

<sup>106</sup> *Id.* at 779.

<sup>107</sup> 855 F.2d 1380 (9th Cir. 1988).

<sup>108</sup> *See id.* at 1381. The No GWEN Alliance (“Alliance”) challenged the Air Force’s EA and subsequent issuance of a Finding of No Significant Impact. *Id.* The Alliance argued that the Air Force should have prepared an Environmental Impact Statement that considered the environmental impacts of nuclear war. *Id.* It claimed that the GWEN system was inherently destabilizing and would actually make nuclear war more probable. *Id.*

<sup>109</sup> *Id.* at 1385.

<sup>110</sup> *Id.* at 1385–86 (citing *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974)).

<sup>111</sup> *Id.* at 1386.

<sup>112</sup> *Id.*

might be launched against the nation's nuclear power plants.<sup>113</sup> Recognizing that nuclear facilities are both attractive and vulnerable targets for attack, many began to push the Nuclear Regulatory Commission (NRC) to take acts of terrorism into consideration as part of the environmental review process for a facility's licensing or relicensing.<sup>114</sup> The NRC, however, has long maintained that it need not address the potential impacts of terrorism in an Environmental Impact Statement (EIS) and has thus routinely declined to do so.<sup>115</sup> Recently, federal courts have produced divergent results in lawsuits petitioning them to compel National Environmental Policy Act (NEPA) consideration of terrorism.<sup>116</sup> In *San Luis Obispo Mothers For Peace v. Nuclear Regulatory Commission*,<sup>117</sup> the U.S. Court of Appeals for the Ninth Circuit held that the NRC must account for the environmental impacts of acts of terrorism.<sup>118</sup> Conversely, the U.S. Court of Appeals for the Third Circuit declared in *New Jersey Department of Environmental Protection v. U.S. Nuclear Regulatory Commission*<sup>119</sup> that such impacts do not require evaluation because they exceed the scope of NEPA's mandate.<sup>120</sup>

#### A. *The Ninth Circuit: Mothers For Peace*

In December 2001, Pacific Gas & Electric Company (PG&E) filed an application with the NRC for a license to build and operate an interim spent fuel storage installation at PG&E's Diablo Canyon Power Plant in San Luis Obispo, California.<sup>121</sup> In response the San Luis Obispo Mothers for Peace, a local non-profit organization, alleged, inter alia, that the NRC impermissibly neglected to address the potential environmental impacts of terrorist attacks on the facility.<sup>122</sup> The NRC rejected this contention and issued a Finding of No Significant Impact in its subsequent Environmental Assessment (EA), claiming, "an NRC environ-

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<sup>113</sup> See Michael S. Munson, *Averting Nuclear 9/11: The Need to Move Beyond NEPA and Transition to a Homeland Security-Administered Infrastructure Security Statement*, 35 WM. & MARY ENVTL. L. & POL'Y REV. 335, 347 (2010).

<sup>114</sup> Briggs, *supra* note 12, at 225.

<sup>115</sup> See N.J. Dep't of Envtl. Prot. v. Nuclear Regulatory Comm'n, 561 F.3d 132, 135 (3rd Cir. 2009); San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm'n, 449 F.3d 1016, 1022 (9th Cir. 2006); *In re Private Fuel Storage*, L.L.C., 56 N.R.C. 340, 357 (2002).

<sup>116</sup> *Mothers for Peace*, 449 F.3d at 1035; *New Jersey*, 561 F.3d at 144.

<sup>117</sup> 449 F.3d at 1016.

<sup>118</sup> *Id.* at 1035.

<sup>119</sup> 561 F.3d at 132.

<sup>120</sup> *Id.* at 143-44.

<sup>121</sup> *Mothers for Peace*, 449 F.3d at 1019-21.

<sup>122</sup> *Id.* at 1021-22.

mental review is not the appropriate forum for the consideration of terrorist attacks.”<sup>123</sup>

The NRC’s position that NEPA does not require consideration of the environmental effects of terrorist attacks is primarily based upon the reasoning from *In re Private Fuel Storage*.<sup>124</sup> In accordance with the arguments from that case, the NRC reasserted that (1) the possibility of a terrorist attack is too far removed from the natural or expected consequences of agency action; (2) because the risk of terrorist attack is indeterminate, the analysis is likely to be meaningless; (3) NEPA does not require a “worst case” scenario analysis; and (4) NEPA’s public process is not an appropriate forum for sensitive security issues.<sup>125</sup> The Ninth Circuit reviewed the NRC’s findings for reasonableness and concluded that each of the four proffered grounds, “either individually or collectively, [did] not support the NRC’s categorical refusal to consider the environmental effects of a terrorist attack.”<sup>126</sup>

### 1. The Ninth Circuit Rejects Applicability of the *Metropolitan Edison* Test

The Ninth Circuit began its analysis with the NRC’s first ground for refusal and inquired whether the proposed agency action had the potential to significantly affect the quality of the human environment.<sup>127</sup> The NRC had argued that the appropriate framework for examination was the proximate cause analysis in *Metropolitan Edison Co. v. People Against Nuclear Energy*.<sup>128</sup> The Ninth Circuit, however, found the *Metropolitan Edison* test to be inapplicable.<sup>129</sup> The court claimed that *Metropolitan Edison* was distinguishable because it dealt with the potential risk of psychological damage to individuals in the vicinity of a nuclear plant upon the facility’s reopening.<sup>130</sup> The Ninth Circuit held instead that *No GWEN Alliance of Lane County, Inc. v. Aldridge* provided the appropriate framework for analysis.<sup>131</sup>

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<sup>123</sup> *Id.* at 1024.

<sup>124</sup> *Id.* at 1022; *Private Fuel Storage*, 56 N.R.C. at 340–50.

<sup>125</sup> *Mothers for Peace*, 449 F.3d at 1022; *Private Fuel Storage*, 56 N.R.C. at 340–50.

<sup>126</sup> *Mothers for Peace*, 449 F.3d at 1028.

<sup>127</sup> *Id.* at 1029.

<sup>128</sup> *Id.* Accordingly, the NRC claimed that the nexus between the licensing of a nuclear facility and the environmental impacts of a terrorist attack exceeds the scope of a reasonably close causal relationship. *Id.*

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup> *Id.*

## 2. The Ninth Circuit's Endorsement of the *No GWEN* Approach

In *No GWEN*, the Ninth Circuit held the nexus between construction of an emergency network system and nuclear war to be too attenuated to require discussion of the potential environmental impacts.<sup>132</sup> In *Mothers for Peace* the court explained that *Metropolitan Edison*, *No GWEN*, and the case at bar all dealt with a series of three events—(1) a major federal action; (2) a change in the physical environment; and (3) an effect.<sup>133</sup> Although *Metropolitan Edison* was concerned with the relationship between events two and three, *No GWEN* and the case at bar were concerned with the link between events one and two.<sup>134</sup> The appropriate inquiry in *Mothers for Peace* was therefore whether terrorist attacks are so “remote and highly speculative” as to go beyond the limits of NEPA’s required analysis.<sup>135</sup> The court concluded that this possibility was not too remote and highly speculative because the presence of the new storage installation would present an attractive target and increase the probability of an attack on the facility.<sup>136</sup>

## 3. Rejection of the NRC’s Additional Grounds for Refusal

The NRC argued that it did not need to address the environmental impacts of acts of terrorism because the risk of a terrorist attack could not be adequately determined.<sup>137</sup> The Ninth Circuit flatly rejected this argument on the basis that NEPA does not require the establishment of a precise numeric probability of risk.<sup>138</sup> Moreover, the court found no authority to support the NRC’s implicit conclusion that it could dismiss potential environmental impacts simply by characterizing them as “unquantifiable.”<sup>139</sup>

The court rejected the NRC’s third ground for refusal—that the agency is not required to conduct a “worst-case” analysis—as misguided.<sup>140</sup> The Ninth Circuit contended that the NRC wrongly considered the plaintiff’s request for a discussion of the potential environmental impacts of a terrorist attack as tanta-

<sup>132</sup> *No GWEN*, 855 F.2d at 1386; *Mothers for Peace*, 449 F.3d at 1029.

<sup>133</sup> See *Metropolitan Edison*, 460 U.S. at 771–72; *Mothers for Peace*, 449 F.3d at 1029; *No GWEN*, 855 F.2d at 1384–85.

<sup>134</sup> *Mothers for Peace*, 449 F.3d at 1029–30.

<sup>135</sup> *Id.* at 1030.

<sup>136</sup> *Id.* The court additionally found that the NRC’s own post 9/11 efforts to undertake a “top to bottom” security review against threats of terrorism contradicted its subsequent argument that the possibility of attack was remote and highly speculative. *Id.* at 1030–31.

<sup>137</sup> *Id.* at 1031.

<sup>138</sup> *Id.*

<sup>139</sup> *Id.* at 1032. In fact, there is case law to the contrary. *Limerick Ecology Action, Inc. v. Nuclear Regulatory Comm’n*, 869 F.2d 719, 719 (3rd Cir. 1989).

<sup>140</sup> *Mothers for Peace*, 449 F.3d at 1032–33.

mount to a “worst-case” analysis.<sup>141</sup> According to the court, the possibility of terrorist attack is not a “worst-case” scenario merely by virtue of the low or indeterminate likelihood of its occurrence.<sup>142</sup>

The Ninth Circuit proved unreceptive to the NRC’s final argument that compliance with the plaintiff’s request was unreasonable given associated security concerns.<sup>143</sup> In admonishing this argument, the court pointed to the lack of case law supporting the defendant’s position that security concerns exempt an agency from NEPA’s § 102(2)(C) requirements.<sup>144</sup>

### B. *The Third Circuit: New Jersey*

In *New Jersey*—three years after the Ninth Circuit decided *Mothers for Peace*—the Third Circuit addressed the same fundamental issue of whether the NRC must account for acts of terrorism as part of its facility licensing process.<sup>145</sup> Unmoved by the persuasive authority of the Ninth Circuit’s decision, the Third Circuit reached a divergent result and created a circuit split.<sup>146</sup>

In 2005, the AmerGen Energy Company applied to the NRC for renewal of its operating license for the Oyster Creek facility located in Ocean Township, New Jersey (“Oyster Creek”).<sup>147</sup> The New Jersey Department of Environmental Protection (NJDEP) subsequently challenged the NRC’s failure to prepare an EIS addressing the potential impacts of an airborne terrorist attack on Oyster Creek.<sup>148</sup>

The NRC’s position was that terrorism is a security issue bearing no relationship to the ageing of the facility and was thus inappropriate for consideration in a relicensing review.<sup>149</sup> The NRC additionally found that NEPA imposes no duty to consider such intentionally malevolent acts because they are “too far removed from the natural or expected consequences of agency ac-

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<sup>141</sup> *Id.* at 1033.

<sup>142</sup> *Id.* at 1033–34.

<sup>143</sup> *Id.* at 1034.

<sup>144</sup> 42 U.S.C. § 4332(2)(C) (2006); see *Mothers for Peace*, 449 F.3d at 1034. “There is no ‘national defense’ exemption to NEPA . . . [T]his mandate includes weighing the environmental costs of the [project] even though the project has serious security implications.” *Id.* (quoting *No GWEN*, 855 F.2d at 1038). Additionally, refraining from publicizing certain information, even on the basis of security concerns, was found to impede satisfaction of NEPA’s public participation function. *Id.* at 1034–35.

<sup>145</sup> See *New Jersey*, 561 F.3d at 133; *Mothers for Peace*, 449 F.3d at 1019.

<sup>146</sup> See *New Jersey*, 561 F.3d at 144.

<sup>147</sup> *Id.* at 135.

<sup>148</sup> *Id.*

<sup>149</sup> See *id.*



tion.”<sup>150</sup> Also, such analysis would be redundant given previous efforts and reviews.<sup>151</sup>

The NJDEP was unsatisfied with these findings and filed a petition for judicial review of the NRC’s order.<sup>152</sup> The NJDEP’s primary argument was that the NRC has a duty to protect against foreseeable harm, irrespective of the fact that the source of that harm is an intentional criminal act.<sup>153</sup> The NJDEP cited both the September 11th attacks and the NRC’s own efforts to improve security at nuclear facilities as evidence of the foreseeability of environmental harm precipitated by terrorist attacks.<sup>154</sup> Despite the NJDEP’s claim that *Metropolitan Edison* was inapplicable to the current case, the Third Circuit found otherwise.<sup>155</sup>

### 1. The Third Circuit’s Application of *Metropolitan Edison*

According to the Third Circuit, *Metropolitan Edison* drew a manageable line distinguishing the causal changes that make an agency responsible for an effect from those that do not.<sup>156</sup> The court noted that the NRC, in *Metropolitan Edison*, could control the nuclear facility’s function and operation, but not how citizens perceived the risks of another accident.<sup>157</sup> Analogously, in the case at bar, the agency could control whether the Oyster Creek facility’s equipment was suitable for continued operation, but not the safety of the airspace above the facility.<sup>158</sup> The court reasoned that because a terrorist attack requires intervening acts of independent significance, the chain of causal inferences is too attenuated and thus exceeds the requisite reasonably close causal relationship.<sup>159</sup>

The Third Circuit distinguished *Mothers for Peace* on the grounds that the proposed agency action in that case involved the construction of a new facility,

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<sup>150</sup> *Id.* (quoting *In re Amergen Energy, Co.*, 65 N.R.C. 124, 129 (2007)).

<sup>151</sup> *Id.* at 135–36. The NRC noted that (1) it had already undertaken significant efforts to increase security at nuclear facilities, (2) the previously prepared Generic Environmental Impact Statement determined that the effects of a terrorist attack would be no worse than the damage resulting from internally initiated events, and (3) the NRC already performed a site-specific “severe accident mitigation alternatives” analysis in its Supplemental Environmental Impact Statement for the facility. *Id.*

<sup>152</sup> *Id.* at 136.

<sup>153</sup> *Id.* at 137.

<sup>154</sup> *Id.*

<sup>155</sup> *Id.* at 139.

<sup>156</sup> *Id.*

<sup>157</sup> *Id.*

<sup>158</sup> *Id.*

<sup>159</sup> *Id.* at 140. The acts of independent significance are third-party criminal acts and the failure of government agencies responsible for preventing terrorism. *Id.*

as opposed to a relicensing as in the case at bar.<sup>160</sup> In the court's estimation, the construction of a new facility constitutes a change to the physical environment with an arguably closer causal relationship to a potential terrorist attack than the relicensing of an existing facility.<sup>161</sup> The Third Circuit additionally noted in support of its departure from the Ninth Circuit that no other circuit had interpreted NEPA so as to require an analysis of the environmental impacts of hypothetical acts of terrorism.<sup>162</sup>

## 2. Argument Against Requiring Redundant and Superfluous Analysis

Additionally, the Third Circuit found that even if NEPA did require a discussion of the environmental impacts of terrorism on Oyster Creek, the NRC already addressed these concerns through other channels.<sup>163</sup> First, the court determined that the NRC's Generic Environmental Impact Statement (GEIS) had previously discussed the risks associated with a terrorist attack and determined them to be impossible to quantify, but nevertheless quite small.<sup>164</sup> The court agreed that these findings were generic and therefore exempt from further discussion in a license renewal EIS.<sup>165</sup>

According to the Third Circuit, when the NRC's GEIS was considered in conjunction with its Supplemental Environmental Impact Statement (SEIS)—which analyzed alternatives to mitigate serious accidents at Oyster Creek—the result was a comprehensive analysis of the potential environmental impacts of terrorism at Oyster Creek.<sup>166</sup> Because the NJDEP failed to offer any evidence of an alternative, or more suitable means of analysis, it failed to satisfy its burden of demonstrating that the NRC could have evaluated more meaningful risks.<sup>167</sup>

In the end, the court agreed with the NRC's position that relicensing the Oyster Creek facility did not bear a reasonably close causal relationship to the potential environmental impacts precipitated by terrorist attacks.<sup>168</sup>

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<sup>160</sup> *Id.* at 142.

<sup>161</sup> *Id.*

<sup>162</sup> *Id.* at 142–43.

<sup>163</sup> *See id.* at 143.

<sup>164</sup> *Id.* The Third Circuit also pointed out that the GEIS states that the effects would be no worse than those resulting from internally initiated events. *Id.*

<sup>165</sup> *Id.*

<sup>166</sup> *See id.* at 144.

<sup>167</sup> *Id.*

<sup>168</sup> *See id.* at 143.

#### IV. THE FUTURE OF THE NRC'S NEPA COMPLIANCE

Given the Supreme Court's refusal to grant certiorari and resolve the incongruities between the decisions of the U.S. Court of Appeals for the Third Circuit and the U.S. Court of Appeals for the Ninth Circuit, whether the Nuclear Regulatory Commission (NRC) is obligated to account for the environmental impacts of terrorism remains an open question outside those jurisdictions.<sup>169</sup> For the time being, the absence of binding authority leaves the lower federal courts with discretion to resolve this issue jurisdiction-by-jurisdiction.<sup>170</sup> Inter-circuit conflict in this context has the undesirable effect of imposing different sets of rules on nuclear facilities, merely as a result of geographic happenstance.<sup>171</sup> If the NRC continues to decline to incorporate the impacts of terrorism within its National Environmental Policy Act (NEPA) § 102(2)(C) analysis, courts outside the Ninth and Third Circuits should follow the lead of the Ninth Circuit and compel such an analysis.<sup>172</sup> Persuasive legal and policy grounds exist for supporting this conclusion, which promotes environmental preservation by requiring informed decision-making.<sup>173</sup>

Additionally, the NRC's current position that its discussion of "accident" scenarios, within the Generic Environmental Impact Statement (GEIS), implicitly accounts for terrorist acts is inadequate.<sup>174</sup> The NRC should therefore amend or supplement its current GEIS to explicitly account for the potential environmental impacts of terrorism.<sup>175</sup>

##### A. *The NRC Should Account for Terrorism*

The NRC's long-maintained justification for not accounting for the impacts of terrorism is four-fold.<sup>176</sup> The NRC argues that (1) the possibility of a terrorist attack is too far removed from the natural or expected consequences of agency action; (2) because the risk of a terrorist attack is indeterminate, the

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<sup>169</sup> See *Pac. Gas & Elec. Co. v. San Luis Obispo Mothers For Peace*, 549 U.S. 1166 (2007) (denying certiorari).

<sup>170</sup> See Wayne A. Logan, *Constitutional Cacophony: Federal Circuit Splits and the Fourth Amendment*, 65 VAND. L. REV. 1137, 1138–39. "On questions not yet squarely resolved by the Supreme Court, the nation's twelve general jurisdiction federal courts of appeals decide as they see fit." *Id.* at 1139.

<sup>171</sup> See *id.* at 1151.

<sup>172</sup> *N.J. Dep't of Env'tl. Prot. v. Nuclear Regulatory Comm'n*, 561 F.3d 132, 143–44 (3rd Cir. 2009); *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm'n*, 449 F.3d 1016, 1035 (9th Cir. 2006); see *In re Private Fuel Storage, L.L.C.*, 56 N.R.C. 340, 357 (2002).

<sup>173</sup> See *infra* notes 198–255 and accompanying text; ENVTL. L. INST., *supra* note 27, § 10:53 n.2.

<sup>174</sup> See 42 U.S.C. § 4332 (2006).

<sup>175</sup> See *infra* notes 169–265 and accompanying text.

<sup>176</sup> See *Private Fuel Storage*, 56 N.R.C. at 357.

analysis is likely to be meaningless; (3) NEPA does not require a “worst case” scenario analysis; and (4) NEPA’s public process is not an appropriate forum for sensitive security issues.<sup>177</sup> The dubious reasoning supporting each of these grounds for refusal warrants critical analysis.<sup>178</sup>

### 1. The Possibility of a Terrorist Attack Is Not Too Far Removed Under the *No GWEN* Framework

Under the test from *No GWEN Alliance of Lane County, Inc. v. Aldridge*, “remote and highly speculative” environmental effects do not require consideration in Environmental Impact Statement (EIS) preparation.<sup>179</sup> The Ninth Circuit was correct in applying this test in *San Luis Obispo Mothers For Peace v. Nuclear Regulatory Commission* because the agency action in *No GWEN* was analytically analogous to a nuclear facility licensing.<sup>180</sup> Minor factual differences notwithstanding, both cases examine the causal link between a federal action and the environmental impacts of an attack.<sup>181</sup> The plaintiffs in *No GWEN* argued that the mere presence of the Ground Wave Emergency Network (“GWEN”) system would provoke attack and make nuclear war more probable.<sup>182</sup> The petitioners in *Mothers for Peace* similarly claimed that the construction of the Diablo Canyon storage installation would increase the likelihood that terrorists would target the facility.<sup>183</sup> Thus, it was reasonable for the Ninth Circuit to adopt the *No GWEN* test to determine whether the nexus between terrorism and construction of a nuclear facility was too “remote and highly speculative,” in the same way that the nexus between construction of the GWEN towers and nuclear war was.<sup>184</sup>

The *No GWEN* test has the added advantage of inclusiveness.<sup>185</sup> The expansive range of impacts that fall within the ambit of this test is consistent with the NEPA’s intentionally broad scope.<sup>186</sup>

<sup>177</sup> *Id.*; see also *Mothers for Peace*, 449 F.3d at 1028.

<sup>178</sup> See *infra* notes 198–255 and accompanying text.

<sup>179</sup> *Mothers for Peace*, 449 F.3d at 1029–30; *No GWEN Alliance of Lane County, Inc. v. Aldridge*, 855 F.2d 1380, 1385 (9th Cir. 1988).

<sup>180</sup> See *No GWEN*, 855 F.2d at 1381; *Mothers for Peace*, 449 F.3d at 1029–30; *New Jersey*, 561 F.3d at 135, 139–40.

<sup>181</sup> See *Mothers for Peace*, 449 F.3d at 1029–30; *No GWEN*, 855 F.2d at 1381.

<sup>182</sup> *No GWEN*, 855 F.2d at 1381–82.

<sup>183</sup> See *Mothers for Peace*, 449 F.3d at 1030.

<sup>184</sup> See *id.* at 1029; *No GWEN*, 855 F.2d at 1381–82.

<sup>185</sup> Ben Schiffman, *The Limits of NEPA: Consideration of the Impacts of Terrorism in Environmental Impact Statements for Nuclear Facilities*, 35 COLUM. J. ENVTL. L. 373, 396–97 (2010). Conversely, application of the proximate cause test from *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766 (1983), is more restrictive and thus excludes too many potential impacts. Schiffman, *supra*, at 396.

Whereas the Ninth Circuit properly applied the *No GWEN* test, the Third Circuit erred in invoking the “reasonably close causal relationship” standard from *Metropolitan Edison Co. v. People Against Nuclear Energy*.<sup>187</sup> *Metropolitan Edison* is inapplicable to cases like *Mothers for Peace* and *New Jersey Department of Environmental Protection v. U.S. Nuclear Regulatory Commission* because it dealt with a different kind of causation.<sup>188</sup> *Mothers for Peace* and *New Jersey* focused on the relationship between the agency action and the resultant environmental impacts.<sup>189</sup> Distinguishably, *Metropolitan Edison* considered the causal link between a change in the physical environment—the risk of subsequent accident resulting from the facility’s renewed operation—and the resultant effect—the increase in psychological harm or fear among local residents.<sup>190</sup> *Metropolitan Edison* is thus distinguishable because it dealt with effects emanating from the *risk* of accident, as opposed to impacts of a *realized risk* or threat.<sup>191</sup> *Metropolitan Edison* would only be applicable had the Ninth and Third Circuits been considering the psychological damage to residents in the vicinity of the nuclear facilities arising from fear of terrorist attacks.<sup>192</sup>

Assuming *No GWEN* provides the appropriate framework, the inquiry shifts to whether the potential environmental impacts of terrorism are remote and highly speculative.<sup>193</sup> Reasoned analysis suggests that such impacts are not too remote and highly speculative.<sup>194</sup>

Unlike the attenuated relationship between installation of the GWEN system and the increased possibility of nuclear war, the causal relationship between NRC facility licensing and the environmental impacts of terrorist acts is not too remote and highly speculative.<sup>195</sup> The Alliance in *No GWEN* expressly conceded that its “contention that GWEN would increase the probability of nuclear war [was] merely speculative.”<sup>196</sup> Circumstantial evidence demon-

<sup>186</sup> 42 U.S.C. § 4332 (2006); Schifman, *supra* note 185, at 396. Additionally, the *No GWEN* test is amenable to the federal courts’ establishment of a common-law standard for formulating the scope of NEPA’s causality requirement, which is advantageous given the various impacts potentially at issue under NEPA. Schifman, *supra* note 185, at 396–97.

<sup>187</sup> See Schifman, *supra* note 185, at 396–97; *Mothers for Peace*, 449 F.3d at 1029; *New Jersey*, 561 F.3d at 139; Lopez, *supra* note 8, at 439–41.

<sup>188</sup> See *Metropolitan Edison*, 460 U.S. at 774–75; *Mothers for Peace*, 449 F.3d at 1029–30.

<sup>189</sup> See *Mothers for Peace*, 449 F.3d at 1029–30; *New Jersey*, 561 F.3d at 132; Schifman, *supra* note 185, at 394–95.

<sup>190</sup> See *Metropolitan Edison*, 460 U.S. at 775; *Mothers for Peace*, 449 F.3d at 1029; Schifman, *supra* note 185, at 394–95.

<sup>191</sup> *Metropolitan Edison*, 460 U.S. at 775; Schifman, *supra* note 185, at 394–95.

<sup>192</sup> Lopez, *supra* note 8, 441–42.

<sup>193</sup> See *Mothers for Peace*, 449 F.3d at 1030.

<sup>194</sup> See *infra* notes 215–228 and accompanying text.

<sup>195</sup> See *No GWEN*, 855 F.2d at 1386; *Mothers for Peace*, 449 F.3d at 1035.

<sup>196</sup> *No GWEN*, 855 F.2d at 1386.

strates that the possibility of a terrorist attack on a nuclear facility is not similarly speculative.<sup>197</sup>

As the Ninth Circuit noted in *Mothers for Peace*, the NRC's own "top to bottom" security review contradicts its stated position that the possibility of terrorist attacks is remote and highly speculative.<sup>198</sup> Although the bolstering of security is not necessarily dispositive on its own, such efforts, in conjunction with other factors, ostensibly demonstrate the reasonable foreseeability of terrorist attacks.<sup>199</sup>

The 9/11 Commission Report, prepared in the wake of the World Trade Center attacks, found that al-Qaeda terrorists had contemplated attacking nuclear plants near New York City in addition to, or as an alternative to, the Twin Towers.<sup>200</sup> In acknowledgement of the risk of such an attack, the NRC circulated a confidential memo to all nuclear power plants in January 2002, warning them of terrorists' plans to "fly a commercial aircraft into a nuclear power plant."<sup>201</sup> The U.S. government also obtained numerous computers, videos, and interviews connected to al-Qaeda, which made repeated references to the targeting of U.S. nuclear facilities.<sup>202</sup>

Other courts have similarly required NEPA-like consideration of terrorism in cases involving similarly hazardous materials.<sup>203</sup> The NRC itself has

<sup>197</sup> See *Mothers for Peace*, 449 F.3d at 1030–31; *infra* notes 220–227 and accompanying text.

<sup>198</sup> *Mothers for Peace*, 449 F.3d at 1030–31. "Our comprehensive review . . . has already resulted in a number of security-related actions to address terrorism threats at both active and defunct nuclear facilities." *Id.* at 1030 (quoting *Private Fuel Storage*, 56 N.R.C. at 343).

<sup>199</sup> See *id.* at 1030–31; see *infra* notes 220–228 and accompanying text.

<sup>200</sup> NATIONAL COMMISSION ON TERRORIST ATTACKS UPON THE UNITED STATES, THE 9/11 COMMISSION REPORT 245 (2004). "During the Spain meeting, [Mohamed] Atta also mentioned that he had considered targeting a nuclear facility he had seen during familiarization flights near New York—a target they referred to as 'electrical engineering.'" *Id.*; Michael Hill, *NEPA at the Limits of Risk Assessment: Whether to Discuss a Potential Terrorist Attack on a Nuclear Power Plant Under the National Environmental Policy Act*, 78 FORDHAM L. REV. 3007, 3009 (2010).

<sup>201</sup> See Lopez, *supra* note 8, at 429–30 (quoting Steve Young, *Nuclear Plants Possible Terror Targets*, *Memo Warns*, CNN (Feb. 1, 2002), <http://www.nci.org/02NCI/02/cnn-02.htm>, available at <http://perma.cc/V6HF-6JE3>). During a debriefing with U.S. authorities, a senior al-Qaeda member also revealed the group's intentions to fly a commercial aircraft into a nuclear power plant. *Id.* Individuals already in the United States had allegedly begun recruiting the assistance of "non-Arabs" to effectuate the plan. *Id.*

<sup>202</sup> *Id.* at 430 (referencing Al Jazeera interviews and videos). A "credible threat" to Pennsylvania's Three Mile Island facility on October 18, 2001 even caused the closure of two nearby airports and the scrambling of military aircraft. *Targets for Terrorism: Nuclear Facilities*, *supra* note 8.

<sup>203</sup> *Sierra Club v. Gates*, 499 F. Supp. 2d 1101, 1134 (S.D. Ind. 2007) (upholding consideration of the risk of terrorism in shipments of chemical weapon materials); *Allen v. Boston Redevelopment Auth.*, 877 N.E.2d 904, 914–15 (2007) (an environmental assessment for the construction of a biomedical research lab impermissibly failed to consider the potential environmental damage caused by a terrorist release of contagious pathogens).

also suggested that it would be prudent to have new nuclear facilities consider the possible impacts of a large aircraft crash as part of its reactor design process.<sup>204</sup> The aggregation of these considerations militates against the NRC's position that the possibility of a terrorist attack on a nuclear facility is too far removed from the underlying licensing action.<sup>205</sup>

## 2. CEQ Regulations Require Evaluation of "Reasonably Foreseeable" Effects Even If Their Exact Probability Is Unknown

In *New Jersey*, the Third Circuit attempted to downplay the risk of terrorist attacks, despite the NRC's comprehensive security review and the findings of the 9/11 Commission.<sup>206</sup> In support of its position that the NRC need not evaluate the environmental impacts of terrorism, the Third Circuit noted the NRC's findings that the threat of terrorist attack is inherently unquantifiable, but nevertheless small.<sup>207</sup> Even if the accuracy of this finding is assumed, it does not absolve the NRC of its obligation to account for such impacts.<sup>208</sup> On the contrary, Council on Environmental Quality (CEQ) regulations expressly mandate consideration of effects notwithstanding the difficulty of their quantification.<sup>209</sup> These regulations obligate agencies to evaluate *reasonably foreseeable*, significant, adverse effects on the human environment.<sup>210</sup> According to the CEQ, reasonable foreseeability "includes impacts which have catastrophic consequences, even if their probability of occurrence is low."<sup>211</sup> The fact that the NRC characterizes the probability of terrorist attack as "small" therefore does not evidence a lack of reasonable foreseeability, nor obviate the need for consideration.<sup>212</sup>

## 3. Analysis of the Impacts of Terrorism Is Distinguishable from a "Worst Case" Scenario Analysis

The NRC argued that a compelled analysis of the environmental impacts of acts of terrorism is tantamount to requiring a "worse case" scenario analysis—"[i]n our view, an EIS is not an appropriate format to address the challenges of terrorism. The purpose of an EIS is . . . [not] to speculate about

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<sup>204</sup> Schifman, *supra* note 185, at 399 (referencing 72 Fed. Reg. 56,287 (Oct. 3, 2007)).

<sup>205</sup> See *infra* notes 218–227 and accompanying text.

<sup>206</sup> See *New Jersey*, 561 F.3d at 143–44.

<sup>207</sup> *Id.* at 143.

<sup>208</sup> See 40 C.F.R. § 1502.22(b)(4) (2012).

<sup>209</sup> See *id.*

<sup>210</sup> See *id.* § 1502.22.

<sup>211</sup> *Id.* § 1502.22(b)(4).

<sup>212</sup> See *id.*; *New Jersey*, 561 F.3d at 143.

‘worst-case’ scenarios and how to prevent them.”<sup>213</sup> Although it is true that NEPA does not require a “worst case” analysis, the NRC nevertheless mistakenly conflated an evaluation of the environmental effects of terrorism with a “worst case” scenario analysis.<sup>214</sup> The Ninth Circuit did not demand that the NRC evaluate the worst conceivable or most extreme environmental effects of a terrorist attack, but rather, merely required it to consider the range of impacts likely to occur in the wake of an attack.<sup>215</sup> Enforcement of this requirement is justified based on CEQ regulatory guidance requiring analysis of reasonably foreseeable impacts, including those with catastrophic consequences.<sup>216</sup> Thus, an evaluation of the environmental impacts of terrorism is both distinguishable from a “worst case” analysis and administratively mandated.<sup>217</sup>

#### 4. NEPA Does Not Contain a Security Exemption

The NRC argued that potential terrorist attacks are security-related issues that are not appropriate for public discussion in an EIS.<sup>218</sup> The apparent concern is that a detailed public disclosure of the potential environmental impacts of terrorist acts on nuclear facilities might threaten national security by making sensitive information readily available to terrorists.<sup>219</sup> It has, however, long been settled by the Supreme Court that NEPA contains no such national defense exception.<sup>220</sup> Consequently, agencies must carry out NEPA’s mandate to the fullest extent possible, even if that necessitates discussing environmental impacts with national security implications.<sup>221</sup> This position harmonizes with NEPA’s public disclosure goal, which seeks to ensure that information relevant to agency decision-making is widely available to promote public participation in the process.<sup>222</sup>

<sup>213</sup> *Mothers for Peace*, 449 F.3d at 1028 (citing *Private Fuel Storage*, 56 N.R.C. at 347).

<sup>214</sup> *Id.* at 1032–33; *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 355, 359 (1979) (holding that NEPA does not require a “worst case analysis”).

<sup>215</sup> *Mothers for Peace*, 449 F.3d at 1034.

<sup>216</sup> *See id.*; 40 C.F.R. § 1502.22 (2012).

<sup>217</sup> *See Mothers for Peace*, 449 F.3d at 1033–34; 40 C.F.R. § 1502.22.

<sup>218</sup> *See New Jersey*, 561 F.3d at 135.

<sup>219</sup> Briggs, *supra* note 12, at 247.

<sup>220</sup> *Weinberger v. Catholic Action of Haw.*, 454 U.S. 139, 147–48 (1981). The Supreme Court declared that “no [NEPA] exception is made for a confidential or classified proposal.” *Id.* The fact that EISs addressing classified proposals may be safeguarded and restricted from public dissemination does not suggest that classified proposals are somehow exempt from NEPA’s EIS requirement. *Id.* at 148.

<sup>221</sup> *No GWEN*, 855 F.3d at 1384 (referencing *Concerned About Trident v. Rumsfeld*, 555 F.2d 817, 823 (1977)).

<sup>222</sup> *See Lopez*, *supra* note 8, at 433; *Robertson*, 490 U.S. at 349. The NRC has also argued that it need not account for terrorism because the Federal Aviation Administration (FAA) and Department of



## 5. The False Distinction Between Licensing and Relicensing Actions

In an attempt to distinguish its case from *Mothers for Peace* and justify the NRC's refusal to account for terrorism, the Third Circuit found in *New Jersey* that construction of a nuclear facility is a federal action closer in causal relation to a potential terrorist attack than the mere relicensing of an existing facility.<sup>223</sup> This logic, however, does not necessarily follow.<sup>224</sup> Both actions, regardless of scope, ultimately have the same result—facilitating the legally permissible operation of a nuclear facility.<sup>225</sup> Notwithstanding the means of enabling operation, the end result—an operable nuclear facility—is the potential target.<sup>226</sup> NEPA requires the NRC to analyze all reasonably foreseeable environmental impacts of agency action, not just the direct environmental impacts of the physical act of construction.<sup>227</sup> CEQ regulations expressly state that environmental impacts include *indirect* effects “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”<sup>228</sup> The environmental impacts of terrorism that are indirectly precipitated by the NRC's construction or continued operation of nuclear facilities would logically fall within the purview of required analysis.<sup>229</sup>

### B. Programmatic Treatment of the Environmental Effects of Terrorism Satisfies NEPA's § 102(2)(C) Mandate

#### 1. CEQ Authorizes a Programmatic Approach to Analyzing the Environmental Impacts of the NRC's Licensing Actions

Having established that the Ninth Circuit properly interpreted NEPA as requiring the NRC to account for the potential environmental impacts of terrorism, it is necessary to determine the appropriate manner of treatment within the

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Defense (DOD) are the proper authorities for preventing an airborne terrorist attack on a nuclear facility. See *New Jersey*, 561 F.3d at 135–36, 141. This argument is misguided given that NEPA does not charge agencies with affirmatively preventing environmental impacts that might significantly affect the quality of the human environment, but rather merely requires that they consider such consequences as part of their decisionmaking process. See 42 U.S.C. § 4332 (2006). Thus, the fact that the FAA and DOD have responsibility for preventing acts of terrorism does not relieve the NRC of its duty to account for the range of environmental impacts that might result in the event that these entities fail to thwart an aerial attack on a nuclear facility. See *id.*

<sup>223</sup> *New Jersey*, 561 F.3d at 142.

<sup>224</sup> See *infra* notes 251–255 and accompanying text.

<sup>225</sup> See 42 U.S.C. § 2131 (2006) (requiring proper licenses as a prerequisite for the operation of nuclear facilities).

<sup>226</sup> See Lopez, *supra* note 8, at 429–30.

<sup>227</sup> 40 C.F.R. § 1508.8(b) (2012).

<sup>228</sup> *Id.*

<sup>229</sup> See *id.*; *Mothers for Peace*, 449 F.3d at 1035.

EIS.<sup>230</sup> The NRC treats the construction of a new nuclear facility differently than the relicensing of an existing facility for purposes of EIS preparation.<sup>231</sup> The NRC takes a programmatic approach to the relicensing of existing facilities while requiring a site-specific analysis for construction of new facilities.<sup>232</sup> The programmatic approach to relicensing actions requires preparation of a Supplemental Environmental Impact Statement (SEIS) that builds upon the standardized GEIS that is utilized for all license renewals.<sup>233</sup>

CEQ regulations instruct that agencies are permitted to evaluate major federal actions programmatically when such actions are linked geographically or generically.<sup>234</sup> The NRC's licensing and relicensing actions constitute generically linked agency actions.<sup>235</sup> That is, these actions are comparable with respect to timing (relicensing occurs every twenty years), impacts, alternatives, and subject matter.<sup>236</sup> The NRC's use of a programmatic approach is also justified by regulations expressly encouraging tiering.<sup>237</sup> The NRC therefore need not engage in the superfluous and repetitive discussion of issues that will be common to all facilities every time it reviews an application for relicensing.<sup>238</sup> One such issue, common to all nuclear plants and thus ripe for programmatic analysis, is the potential environmental impacts of terrorism.<sup>239</sup>

## 2. The NRC's GEIS Should Explicitly Address Terrorism Rather Than Implicitly Grouping It Within the Scope of "Accident"

The NRC argued in *New Jersey* that the existing GEIS, combined with its SEIS for the Oyster Creek facility, sufficiently addressed the environmental impacts of terrorism.<sup>240</sup> The NRC contended that its programmatic analysis of Category 1 issues, more specifically "accident," encompasses and therefore accounts for the possibility of terrorist attacks.<sup>241</sup>

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<sup>230</sup> See *supra* notes 198–255 and accompanying text; *Mothers for Peace*, 449 F.3d at 1035.

<sup>231</sup> See 10 C.F.R. § 51.95 (2012); FRANK B. CROSS, FEDERAL ENVIRONMENTAL REGULATION OF REAL ESTATE § 1:13 (Oct. 2012); *supra* notes 75–78 and accompanying text.

<sup>232</sup> See 10 C.F.R. § 51.95; *id.* § 51.75; CROSS, *supra* note 231.

<sup>233</sup> See 10 C.F.R. § 51.95(c).

<sup>234</sup> 40 C.F.R. § 1502.4 (c) (2012).

<sup>235</sup> See *id.* § 1502.4(c)(2).

<sup>236</sup> See *id.*

<sup>237</sup> See *id.* § 1502.20.

<sup>238</sup> See *id.*

<sup>239</sup> See *id.*; *infra* notes 169–265 and accompanying text.

<sup>240</sup> *New Jersey*, 561 F.3d at 135–36.

<sup>241</sup> See *id.* at 134.

The NRC's GEIS outlines two categories of accidents, those that are "design-based" and those qualifying as "severe."<sup>242</sup> Terrorist attacks, however, do not fit neatly into either category.<sup>243</sup> The GEIS's treatment of externally initiated severe accidents mentions tornadoes, floods, earthquakes, fires, and sabotage.<sup>244</sup> The NRC has conducted a detailed probabilistic risk assessment for each of these external events with the notable exception of sabotage.<sup>245</sup> Although it is debatable whether a terrorist attack can accurately be considered an act of sabotage, technical distinctions aside, the NRC's treatment of terrorism in this manner would nevertheless be inadequate.<sup>246</sup> After downplaying the probability of a terrorist attack as "small" and "not reasonably expected," the NRC dismissively opines that the potential damage would be no worse than that expected from internally initiated events.<sup>247</sup> This vague treatment constitutes the entirety of the agency's analysis.<sup>248</sup>

In *New Jersey*, the New Jersey Department of Environmental Protection (NJDEP) implicitly questioned the adequacy of the GEIS's current treatment of terrorism by suggesting that the resultant environmental impacts would be distinguishable from those expected from internally initiated events (i.e. accidents).<sup>249</sup> At the end of its opinion, the Third Circuit hinted that the environmental impacts of terrorism should require separate, express treatment.<sup>250</sup> The court highlighted that the NJDEP failed to adequately explain how or why a terrorist attack on Oyster Creek would produce different impacts from internally initiated severe accidents.<sup>251</sup> The court concluded that "the burden is on the petitioner to demonstrate that the NRC could evaluate risks more meaningfully than it has already done."<sup>252</sup> The NRC could evaluate such risks more meaningfully than it has done in its existing GEIS "accident" analysis by specifical-

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<sup>242</sup> Office of Nuclear Regulatory Research, *supra* note 75, § 5.3.

<sup>243</sup> *See id.*; *Mothers for Peace*, 449 F.3d at 1035.

<sup>244</sup> Office of Nuclear Regulatory Research, *supra* note 75, § 5.3.3.1.

<sup>245</sup> *Id.*

<sup>246</sup> *See id.*; *New Jersey*, 561 F.3d at 143–44.

<sup>247</sup> *See New Jersey*, 561 F.3d at 143; Office of Nuclear Regulatory Research, *supra* note 75, § 5.3.3.1.

<sup>248</sup> *See* Office of Nuclear Regulatory Research, *supra* note 75, § 5.3.3.1 (stating that "external events are not discussed in further detail in this chapter").

<sup>249</sup> *New Jersey*, 561 F.3d at 143.

<sup>250</sup> *See id.* at 144.

<sup>251</sup> *Id.*

<sup>252</sup> *Id.* (referencing *Limerick Ecology Action, Inc. v. Nuclear Regulatory Comm'n*, 869 F.2d 719, 744 n.31 (3rd Cir. 1989)).

ly incorporating a section discussing the potential environmental impacts of terrorism.<sup>253</sup>

Thus, while the Third Circuit was correct in pointing out the Supreme Court's declaration that generic analysis "is clearly an appropriate method of conducting the hard look required by NEPA," that fact does not give the NRC a license to categorically ignore reasonably foreseeable environmental impacts triggered by acts of terrorism.<sup>254</sup> To comply with NEPA's mandate, the NRC should amend its existing GEIS to incorporate a direct discussion of the environmental impacts of terrorism.<sup>255</sup> An up-front investment in the time and resources necessary to include a programmatic analysis of terrorism would likely pay dividends in the long run by keeping the NRC out of recurrent litigation similar to that in which it has recently found itself embroiled.<sup>256</sup>

The obvious concern likely to be raised in response to this proposal is that programmatic treatment of terrorism in the GEIS is inappropriate given the inherent differences between the various facilities—geographic or otherwise.<sup>257</sup> This issue may not, however, be as problematic as it initially appears.<sup>258</sup> First, any site-specific Category 2 issues—environmental impacts of terrorism likely to be unique to a particular facility—can be accounted for in the site-specific SEIS that is mandatory for all relicensing applications.<sup>259</sup> Those impacts requiring supplemental treatment are nevertheless likely to be quite rare in this context.<sup>260</sup>

The NRC has stringent siting and design guidelines that render each nuclear facility geographically similar and therefore should mitigate any potential concern over the inability of a programmatic approach to account for site-specific differences.<sup>261</sup> Nuclear power plants are typically located on "flat-to-

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<sup>253</sup> See Office of Nuclear Regulatory Research, *supra* note 75, § 5.3. While not a perfect example, the NRC has already undertaken a similar effort in response to the Ninth Circuit's ruling in *Mothers for Peace*. NUCLEAR REG. COMM'N, SUPPLEMENT TO THE ENVIRONMENTAL ASSESSMENT AND FINAL FINDING OF NO SIGNIFICANT IMPACT RELATED TO THE CONSTRUCTION AND OPERATION OF THE DIABLO CANYON INDEPENDENT FUEL STORAGE INSTALLATION 6–7 (2007). This analysis was confined to the radiological impacts of terrorism. See *id.*

<sup>254</sup> *New Jersey*, 561 F.3d at 144 (quoting *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 101 (1983)); *Mothers for Peace*, 449 F.3d at 1035.

<sup>255</sup> See 42 U.S.C. § 4332(2)(C) (2006); Office of Nuclear Regulatory Research, *supra* note 75, § 5.3.

<sup>256</sup> See, e.g., *Mothers for Peace*, 449 F.3d at 1016; *New Jersey*, 561 F.3d at 132.

<sup>257</sup> See 40 C.F.R. § 1502.4(c) (2012).

<sup>258</sup> See *infra* notes 259–265 and accompanying text.

<sup>259</sup> See CROSS, *supra* note 231; Office of Nuclear Regulatory Research, *supra* note 75, § 1.1.

<sup>260</sup> See 10 C.F.R. § 51.95(c) (2012); Office of Nuclear Regulatory Research, *supra* note 75, § 5.3.

<sup>261</sup> See 10 C.F.R. § 100.10 (2012). "Nuclear power plants are sited, designed, and operated to minimize impacts to the environment." Office of Nuclear Regulatory Research, *supra* note 75, § 2.3.

rolling countryside in wooded or agricultural areas.”<sup>262</sup> Moreover, eighty percent of all facilities have fifty-mile population densities of fewer than 500 persons per square mile.<sup>263</sup> These siting regulations have the effect of minimizing the geographic and physical differences among facility sites, making them more amenable to programmatic treatment.<sup>264</sup> The NRC’s programmatic approach to analyzing the environmental impacts of nuclear facility relicensing therefore procedurally comports with recognized standards of proper NEPA analysis, but, nevertheless, needs substantive amending to address terrorism directly.<sup>265</sup>

### CONCLUSION

The environmental impacts of a terrorist attack would likely be similar, if not worse, than those that occurred in the wake of Japan’s Fukushima meltdown. The Nuclear Regulatory Commission (NRC) must account for such effects given that the possibility of terrorist attack is not too far removed from its underlying licensing action. The NRC’s current approach falls short of fulfilling the National Environmental Policy Act’s (NEPA) twin aims of “inject[ing] environmental considerations into the [NRC’s] decisionmaking process” and “inform[ing] the public that the [NRC] has considered environmental concerns in its decisionmaking process.” By amending its existing Generic Environmental Impact Statement to address terrorism explicitly, the NRC will achieve a higher degree of compliance with NEPA’s § 102(2)(C) mandate and further promote environmental preservation by taking into account a wider array of reasonably foreseeable environmental harms.

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<sup>262</sup> Office of Nuclear Regulatory Research, *supra* note 75, § 2.2.1.

<sup>263</sup> *Id.* The most notable exception is the Indian Point Station, located within fifty miles of New York City, which has a population density of nearly 2000 people per square mile. *Id.*

<sup>264</sup> See 10 C.F.R. § 100.10; Office of Nuclear Regulatory Research, *supra* note 75, § 2.

<sup>265</sup> See 40 C.F.R. § 1502.4 (2012); 10 C.F.R. § 51.95(c); see *supra* notes 257–264 and accompanying text.